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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,748	09/24/2001	Tetsuya Katagiri	48864-042	5033

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EXAMINER

KIM, CHONG R

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,748

Applicant(s)

KATAGIRI ET AL.

Examiner

Charles Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 20-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 20-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment and Arguments

1. Applicant's amendment filed on November 19, 2004 has been entered and made of record.
2. In view of applicant's amendment, the claim objections are withdrawn.
3. In view of applicant's amendment, the 112 second paragraph rejections are withdrawn.
4. Applicant's arguments, see pages 8-10, filed November 19, 2004, with respect to the rejection(s) of claim(s) 1-7, 9 under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (USPN 6,356,272) in view of Klein et al. (USPN 6,228,028) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the combination of Hotta, Japanese Patent No. 2000-339467 ("Hotta") and Murata, Japanese Patent No. 10-332347 ("Murata"). The details of the rejection are provided below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-8, 20-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hotta, Japanese Patent No. 2000-339467 ("Hotta") and Murata, Japanese Patent No. 10-332347 ("Murata").

Referring to claim 1, Hotta discloses a three-dimensional data generating system comprising:

- a. a measurement portion (11) for generating three-dimensional data by measuring a three-dimensional shape of an object from plural directions so as to generate plural data (pages 2-3, paragraphs 10-13);
- b. a position and posture changing portion (13) for changing a position or a posture of the object (page 3, paragraph 15);
- c. a position and posture sensing portion for measuring a relative position and a relative posture between the measurement portion and the position and posture changing portion (page 3, paragraph 15, pages 4-5, paragraphs 38-40);
- d. a data integrating portion for integrating plural sets of three-dimensional data generated by plural times of measurements in the measurement portion based on each of the relative positions and the relative postures measured by the position and posture sensing portion at each of the measurements (page 3, paragraph 16).

Hotta does not explicitly disclose that the position and posture sensing portion includes a first element provided in the measurement portion and a second element provided in the position and posture changing portion. However, these features were exceedingly well known in the art. For example, Murata discloses a position and posture sensing portion that includes a first element (3) provided in a measurement portion and a second element (A-D) provided on a

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position and posture changing portion, for measuring the relative position and a relative posture between the first and second element (pages 3-4, paragraphs 10-14 and figure 1).

Hotta and Murata are combinable because they are both concerned with three-dimensional data generating systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the position and posture sensing portion of Hotta so that it includes the first and second element of Murata. The suggestion/motivation for doing so would have been enhance the accuracy of the data integrating process by utilizing the position and posture measurements from Murata's position and posture sensing portion. Therefore, it would have been obvious to combine Hotta with Murata to obtain the invention as specified in claim 1.

Referring to claim 2, Hotta further discloses that the position and posture changing portion includes a movable member (13a) whose position and posture are kept constant with respect to the object during the plural times of measurements (figure 1).

Murata further discloses that the second element is provided on a movable member (figure 1). Note that the movable member in Murata is analogous to the movable member in Hotta.

Referring to claim 3, Hotta further discloses that the position and posture changing portion further includes a support board (13b) for changing the position and the posture of the movable member, and the movable member is a turn table rotationally driven by the support board (figure 1).

Referring to claim 4, Hotta further discloses that the position and posture changing portion includes:

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- i. a movable member (13a) whose position and posture are kept constant with respect to the object during the plural times of measurements (figure 1),
- ii. a base member (13b) for changing the position and the posture of the movable member (figure 1)
- iii. a detecting portion (13c) for detecting an amount of change of the position and the posture of the movable member with respect to the base member (page 3, paragraph 15 and figure 1).

Murata further discloses that the second element is provided in a base member (figure 1). Note that the base member in Murata is analogous to the base member in Hotta.

Referring to claim 5, Hotta further discloses that the base member is a support board and the movable member is a turn table rotationally driven by the support board (figure 1), and the detecting portion includes an encoder for encoding the rotational angle of the turn table to the support board (page 3, paragraph 15 and figure 1).

Referring to claim 6, Murata further discloses that the first element measures the position and the posture of the second element with respect to the first element (pages 3-4, paragraphs 10-14).

Referring to claim 7, Murata further discloses that the first element measures the position and posture of the second element with respect to the first element (pages 3-4, paragraphs 10-14).

Referring to claim 8, Murata further discloses that plural second elements are provided in the position and posture changing portion (figure 1).

Referring to claim 20, see the rejection of at least claim 1 above.

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Referring to claim 21, see the rejection of at least claim 2 above.

Referring to claim 22, see the rejection of at least claim 3 above.

Referring to claim 23, see the rejection of at least claim 4 above.

Referring to claim 24, see the rejection of at least claim 5 above.

Referring to claim 25, see the rejection of at least claim 6 above.

Referring to claim 26, see the rejection of at least claim 7 above.

Referring to claim 27, see the rejection of at least claim 8 above.

6. Claims 9 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hotta, Japanese Patent No. 2000-339467 ("Hotta"), Murata, Japanese Patent No. 10-332347 ("Murata"), and Anderson, U.S. Patent No. 5,640,170 ("Anderson").

Referring to claim 9, Hotta and Murata do not explicitly disclose that the position and posture sensing portion measures the relative position and posture between the first and second element by electromagnetic induction. However, this feature was exceedingly well known in the art. For example, Anderson discloses a position and posture sensing portion that measures the relative position and posture between a first and second element by electromagnetic induction (col. 2, lines 15-57).

Hotta, Murata, and Anderson are combinable because they are all concerned with three-dimensional data generating systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the position and posture sensing portion of Hotta and Murata so that it measures the relative position and posture between a first and second element by electromagnetic induction, as taught by Anderson. The suggestion/motivation for

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doing so would have been enhance the accuracy of the position and posture measurements (Anderson, col. 2, lines 44-53). Therefore, it would have been obvious to combine Hotta and Murata with Anderson to obtain the invention as specified in claim 9.

Referring to claim 28, see the rejection of at least claim 9 above.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 571-272-7421. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri 9:30am to 6pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571-272-7414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ck

April 26, 2005


Jon Chang
Primary Examiner